

# REPORT

ON THE

## Sanitary Circumstances and Administration

OF THE

### LURGAN URBAN DISTRICT,

BY

**DR. C. J. CLIBBORN,**

**Medical Inspector of the Local Government  
Board.**

AUGUST, 1901.

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To the Local Government Board,  
Dublin.

“Lurgan is a prosperous and flourishing town in the north-east of the County Armagh. It is situated 20 miles south-west of Belfast and a mile and a half south from Lough Neagh.

“Lurgan was built by James Brownlow, to whom a grant of the town was made by James the First, in 1619. It consisted of 42 houses, all built by English settlers. It was burned by the insurgents in 1641 and again by the troops of James the Second, and after its restoration in 1690 a patent for a market and fair was obtained. The population, according to the census of 1891, was 11,447, occupying 2,750 houses.

“The area within the town boundary is, I believe, 851 acres; the annual valuation of rateable property is about £25,000, and the township is increasing in value. In the year 1831 the population was only 3,760 and the rateable property was then £5,578.

“The municipal affairs of Lurgan are managed by the Urban District Council. The urban council consists of fifteen members, and the sanitary staff comprises an executive sanitary officer, a medical (superintendent) officer of health, and a sanitary sub-officer.

“Geological Formation.—The main thoroughfare of Lurgan for upwards of half a mile from the eastern end of Queen Street to the church extends along the

crest of a hill in a north-westerly direction at a level of about 200 feet above the sea line and about 150 feet above the summer level of Lough Neagh, from which it is distant about one and a half miles. Along either side of this ridge or crest the ground falls rapidly, so that its configuration lends itself admirably to the efficient sewerage of the district.

“The underlying geological formation consists of a basalt rock covered with beds of clay gravel and cinder of varying thickness up to 40 feet. In some places the rock comes within a few feet of the surface and its hardness and compactness have been such that frequently blasting operations are required in making and laying new sewers. A layer of dark bluish tenacious clay also frequently rests on the trap.

“Beneath this basaltic formation which is of enormous thickness there are great beds of chalk and green sand which in turn rest on the new red sandstone. The chalk beds come to the surface along a cliff or bluff about two miles from the town in an easterly direction, and with a dip or depression 5dg. extend under Lough Neagh in a north-westerly direction so that the enormous thickness of the overlying trap may be fairly closely calculated. It would probably be 770 feet below the surface of the highest end of Queen Street.

“Water Supply—Until 1893 the town was entirely supplied with water from surface wells sunk to varying depths in the beds of clay and gravel. As the town enlarged, these, however, proved quite inadequate to the wants of the town and numerous attempts were made to get a further supply by boring into the traps, but without avail, any water that was got from this source being so hard, in some cases 70dg. that it was quite unfit for domestic or manufacturing purposes. The procuring of a public supply of water suitable for all purposes was a very prominent question at the meetings of the commissioners ever

since their first formation under the Towns Improvement Act, 1854. Eminent engineers were asked from time to time to enquire into schemes, but nothing really was done till 1890, when Mr. J. W. Glover, M. I. C. E., consulting engineer, gave his opinion after examining all probable sources that the only feasible scheme was to take a supply from Lough Neagh by pumping. Having ascertained from numerous analyses by first-class chemists that the Lough water would, if properly filtered be in every respect suitable, the matter was taken in hand by the then commissioners and in 1893 a pumping scheme was completed with a station at Castor Bay on the Lough shore, and a reservoir at Gibson's Hill capable of supplying 500,000 gallons daily, or as was calculated 25 gallons per head per day for a population of 20,000. During the past year the quantity actually consumed averaged 17 gallons per head each day. A good deal of prejudice and sentiment prevailed at first against the use of the water for cooking purposes, but these have been gradually overcome. At the present time the water is almost universally used for all purposes. The houses of the working classes are having the water brought into them by the owners at a very rapid rate and scarcely a month passes that applications are not made for permission to introduce the water into several blocks of houses, so much so that the urban council have resolved to remove several street fountains as being altogether unneeded.

"The cost of the water scheme was £28,000, imposing at first a burthen on the rates of 2s 3d in the pound but this burthen has been gradually diminishing until it is now reckoned at 1s 5d, and every person seems thoroughly satisfied that the value obtained was well worth the cost. The water has only 6 deg. of hardness (Clarke's Scale) and when filtered is a clean, wholesome water.



“ Sewage—Before 1854 the house drains simply emptied themselves into streams than ran along the low lying ground on either side of the ridge on which the town was built. These streams, which carried off the rainfall from a circumscribed district immediately outside the town consisting of agricultural and pasture lands, in the summer were usually dry and presented the appearance of open sewers, so that the commissioners immediately after the adoption of the 'Towns' Improvement Act devoted their attention to lay down proper covered sewers. First, the north-east sewer was made in 1855 and afterwards the south-west, and these with many branches form the almost complete system in use at present.

“ The south-west sewer is flushed by receiving the stream which was formerly called the flush river, which in wet seasons carries a considerable volume of water whilst a communicating sewer at the eastern end of the town conveys a considerable overflow from the same stream to the north-east. These two main sewers are I am informed well-built impervious barrel sewers and the other sewers in the town are formed of glazed earthenware pipes well laid and jointed.

“ The monies required for making all these sewers were borrowed either from private individuals or from the Board of Works and their construction was carried out under the supervision of the town engineer. The two main sewers at this outfall are continued in the direction of Lough Neagh through a low-lying district consisting chiefly of pasture meadows, and it has been the custom for a very long time for the owners of these meadows to irrigate them periodically by means of dams and sluices, and so make use of all the fertilizing material carried down, but this, so far as the north-east sewer is concerned, has, I hear, been discon-

tinued for a number of years, and acting on the advice of their medical superintendent officer of health and commissioners have been contemplating the establishment of a sewage disposal system so as to keep themselves abreast of sanitary requirements of the situation. With this intent Dr Agnew, medical superintendent officer of health, and Mr Shillington were requested by the Commissioners to visit Exeter, London, Headon, Sutton, Manchester, and several other places in England four years ago with a view to advise the commissioners as to the best system suitable for the requirements of Lurgan. These gentlemen duly submitted a report advising the adoption of a modification of the Exeter system on much the same lines as the Sutton system and the council have only been prevented, I understand, from carrying out the same by the small margin of borrowing powers left in consequence of the very large expenditure required for the water. This margin, however is likely to be large enough in a short time to enable them to carry out a scheme and I think they should be encouraged to do so at the earliest possible moment.

“Housing of the Working Class.—Very great improvement has been made in the construction and surroundings of the houses occupied by the working classes since I made my first inspection of this district some years ago. A great number of courts have been closed up in which the houses were so arranged that they could not be made fit for human habitation or provided with proper sanitary accommodation. It has been the aim of the sanitary authority that each house should be provided with a separate enclosed yard, containing separate privy accommodation and a properly constructed ashpit. With very few exceptions, and these confined mainly to the outskirts of the town, nearly every house has been so provided, and during the past two years a still further im-

portant and desirable step has been taken in the endeavour to secure that each of the yards is properly tiled or concreted and provided with a suitable gully-trap and house drain communicating and properly connected with a public sewer, and that as far as possible the ordinary midden privy should be converted or replaced by a properly constructed water-closet and dry ash-pit. Since my last inspection two years ago over 500 middens have been thus altered, and the improvement effected thereby is strongly marked. I was also greatly pleased with the cleanly condition in which these yards and closets were kept as well as the marked improvement noticeable in the interior of the houses and personal habits of the occupants. The improvement in the healthy appearance of the children was very noticeable. You would almost have told in passing through the dwelling-house the particular kind of sanitary accommodation provided in the yard. In a few weeks the Medical Superintendent Officer of Health informed me that about 160 more would be similarly altered and that a great many owners are voluntarily consulting him about making the required changes.

“The Medical Superintendent Officer of Health and the Executive Sanitary Officer have furnished me with the following particulars:—Total number of houses in the town, 2,865; number of houses under £10 valuation, 2,163; number of houses with separate yards, 2,507; number with privies, 1,178; number with water-closets, 1,387; number with water laid on, 1,643; number of houses with water laid on in 1900, 265; number in 1901, 224.

“A great many new houses have been erected during the past few years suitable for the working classes, and of a very comfortable and superior type, each house consisting of four rooms, airy and well ventilated, the kitchen being well tiled. Attached to each house is a tiled or concreted yard with a properly-flushed water-



closet and dry ashpit, the latter being so constructed that the contents can be removed through a trap door at the back without soiling the yard, The ceilings of these houses are never less than 9 feet high and the bye-laws with regard to window space and ventilation are strictly enforced.

“Since my first visit some years ago to this town, when I had to make a most unfavourable report, a great many small courts have been closed up and have disappeared, so that with the exception of McCorry’s Court in North Street, Hazelton’s Court off Edward Street, and one or two courts off Castle Lane, notably Fleming’s Court and Gilbert’s Court, there is really no bad or slum property that could be brought under the Housing of the Working Classes Act and condemned as being unfit for human habitation. This is a very gratifying state of affairs, and one upon which the urban council are to be highly commended. The two large improvement schemes which were taken up by the council some years ago are being brought to a termination. Each one is being opened up by a new and spacious street, which will contribute largely both to the appearance and sanitation of the town.

“Vital Statistics of the Town.—The following table gives the birth and death rate and zymotic death rate for each year of the decade, 1891 to 1900:—

	Birth Rate.	Death Rate.	Zymotic Death Rate.
1891	35·1	24·9	2·1
1892	33·4	25·0	2·5
1893	32·0	17·9	1·5
1894	32·2	20·3	1·8
1895	31·1	27·5	6·2
1896	34·5	18·4	1·8
1897	35·6	20·0	1·5
1898	31·3	20·6	2·8
1899	31·3	22·0	1·7
1900	35·3	24·5	1·4

“ The high death rates in 1895 were caused by 26 deaths from measles and 27 from pertussis out of a total of 71 deaths from Zymotic disease.

“ The number of deaths from Zymotic diseases during the past five years has been as follows:—1896, 21 ; 1897, 17 ; 1898, 32 ; 1899, 20 ; and 1900, 16.

“ Streets.—There are about 10 miles of streets inside the town boundary, the main streets being wide and spacious and well surfaced.

“ With the exception of Church Walk, Castle Lane, and Robert Street, and a few courts that thus exist the remainder of the streets are at least 40 feet wide flanked by pavements and in a great many cases well laid and flagged footpaths.

“ Slaughter-house—There are only two registered slaughter-houses in the town. There were recently two others, but the licenses for these were allowed to lapse and the council refused to re-register them, the buildings being unsuitable for the purpose.

“ The two existing ones though fairly well kept are not to be commended, but I understand that the council are taking steps to put up a public abattoir. This will be a great and much needed improvement, and I trust that the council will see their way to proceed with this work in a short time. Too much attention cannot be given to the providing of a good supply of clean, wholesome, untainted meat for the benefit of the public.

“ Dairies and Cowsheds.—There are 21 registered cowkeepers in the town besides a large number of milk vendors, including some who keep their dairies in the country and bring a supply in twice daily in carts. The sanitary sub-officer is also dairy inspector, and I understand this office has been in existence in Lurgan since 1886.

“ The duties of the Sanitary Authority in connection with this order have been well attended to, and although the suggested

regulations have not yet been adopted, they are being practically carried out, inasmuch as a minimum cubic space of 600 feet for each cow was fixed for all old cow-sheds some years ago. A minimum of 800 feet is required in all new byres. The ventilation and lighting of the sheds are also well looked after, and indeed the different matters requiring attention seem to be attended to by the officials.

"I came across very few pigs in my inspection, and have no doubt their absences contributed largely to the cleanliness and favourable condition of matters that existed in the neighbourhood of some of the houses.

"The following bye-laws under the Public Health Acts are in force in the district, viz:—Prevention of nuisances, building, slaughter-houses, but the bye-laws regarding slaughter-houses are, I am informed, not strictly enforced as the magistrates refuse to convict till the public abattoir is provided by the Urban Council.

"General Remarks—The great improvement that has been effected in the sanitary condition of the town could only have been brought about by the continuous oversight of the different officials. The medical superintendent officer of health, Dr Agnew, has a keen and intelligent interest in the sanitation of his district, and the Urban Council support him in every way.

"The powers vested in the council by the Public Health Acts have been evidently firmly and judiciously used, and the result has been a condition of matters which I am sorry to say is not always to be met with in provincial towns.

"The only points to which I consider it my duty to refer specifically are the necessity for a proper system of sewage disposal, which I trust the council will be enabled and encouraged to undertake in the near future. With the great increase that is taking place in the number of water-closets and the abolition of the in-

sanitary and offensive midden privies, this question must be deemed one of urgency.

“The erection of a public abattoir also appears to be much required, and I think the Urban Council should endeavour to proceed with this project with as little delay as possible. My attention was drawn by the Medical Superintendent of Health to the necessity that exists for a modern and up-to-date steam disinfector. A disinfecting apparatus erected at the workhouse should be equal to the requirements of the rural districts as well as the urban, and the Medical Superintendent Officer of Health’s advice should be obtained as to the best type.”